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The Commonwealth of Massachusetts

Executive Office of Environmental Affairs

Department of Environmental Quality Engineering

Division of Water Pollution Control

One Winter Street, Boston 02108

ANTHONY D. CORTESE, Sc. D.
Commissioner

New Bedford
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Origin 22715

February 28, 1984

Mr. Joseph Yeasted
NUS Corporation
Park West 2
Cliff Mine Road
Pittsburg, PA 15275

Re: Comments
Draft Preliminary Screening
Feasibilty Study
New Bedford

Dear Mr. Yeasted:

The Massachusetts Division of Water Pollution Control has reviewed the subject matter and wishes to submit the following comments.

In general, the report presents a comprehensive and succinct discussion on the technologies available in developing the remedial activities for New Bedford harbor. However, in several instances the screening process appears to be a rehash of a separate earlier report written for another project. For example, the molten salt incinerator is reported as becoming available by mid-1983. The report presently under review was purportedly prepared in late 1983, therefore the availability of the equipment should be known. Also, belt filters are reported as being new technology. While this was true three years ago, they are presently an acceptable technology, being widely used and proven to be reliable. Is the New Bedford screening process report merely a rewrite of a similar report developed for the Hudson River or Waukegan Harbor, with only minor changes?

Several alternatives were rejected because of the "preliminary state of the technology" or because they were in an early stage of development. These alternatives include particle radiation, PCB extraction, fluidized bed incinerator, controlled air incinerator, multiple hearth incinerator, hydrothermal, PCBX and particle radiation. The reason for the rejection of these alternatives should be explained in more detail. Their rejection should also be based on first hand current information rather than second hand information such as literature reviews. It might also be appropriate to reevaluate these alternatives since the technology may have progressed from the time it was originally reviewed in the Hudson River or Waukegan Harbor reports.

Sorbents such as activated carbon were rejected since they are believed to be inefficient. Can this disadvantage be corrected by removing the slurry once the PCB has been absorbed? Can the slurry be

applied at a rate proportional to PCB concentration, thereby increasing its efficiency? Can the use of activated carbon sorbents be restricted to the areas of greatest benefit or effectiveness and in what harbor locations would the utilization of activated carbon sorbents be appropriate? Also, how was it determined that a "significant percentage of the PCBs might remain unfixed on the harbor bottom" with the use of sorbents?

It should be noted that major storm events should not create a problem if the sediment cap technology is selected. With the presence of the hurricane barrier at the mouth of the Acushnet River and the windbreak created by the Coggeshall Street bridge the impact of major storm events will be diminished.

Transport of significant quantities of PCBs from the Acushnet River to New Bedford harbor and Buzzards Bay was cited as a problem that would not be corrected if the No Action alternative was selected. While it can be shown that the river is a PCB source to Buzzards Bay it is debatable whether it is a "significant" contributor. What data supports the fact that the inner harbor is a significant source?

The scraper technology was rejected due to the requirement of excessive dewatering, yet the clay cap and front end loader were retained even though they also require excessive dewatering. Since dewatering is a widely used and well established practice the scraper should be reconsidered. How dry must soil conditions be to allow proper operation of this technology?

Resuspension of sediments as a result of any of the mechanical dredge technologies is a disadvantage that can be controlled. Such controlling mechanisms include silt curtains, cofferdams, and steel sheet pilings. In addition, watertight clamshell buckets are also an effective method of controlling turbidity.

Since resuspension of sediments can be controlled and since the amount of resuspension is similar amoung the mechanical dredges, all mechanical dredges reviewed in this report are relatively equal in turbidity impacts. Therefore, the mechanical dredges reviewed should be retained for further evaluation.

Also, in the next screening phase an acceptable amount of resuspension of sediments or net loss of contaminated sediments permitted should be determined for mechanical dredges, or any technology. This is essential to assess the risks and benefits of the clean-up technologies.

Hydraulic dredges require a deeper operational draft than do mechanical dredges. Hopper dredges cannot operate properly without at least a ten or fifteen foot draft, while other pipeline dredges need three to five feet. For this reason alone many of the hydraulic dredge technologies discussed should be removed from further consideration because of navigational restrictions north of the Coggeshall Street bridge.

On the other hand many of the pneumatic dredges are adaptable to to shallow draft conditions. In particular the pneuma, oozer, and Namtech dredges are known to function well in shallow aquatic environments,

have been used to effectively dredge contaminated sediments and have the flexibility to allow treatment of the dredge material slurry while being disposed. Flocculants or absorbents can be added to the slurry as it is being dredged and transported via the dredge pipeline. Hence, the pollutants can be stabilized while reducing the concentration in the disposal site effluent. Therefore, this equipment should be investigated further, and in more detail including the legal constraints of the Jones Act. Are waiver or variances to the Jones Act allowed? It would be beneficial to reviewers of the report and the Task Force in particular, to append a copy of the Jones Act to the study.

The technology status of the air lift dredge has been categorized as questionable, yet it has been retained for further evaluation. Why?

The multiple hearth incinerator can be utilized for the treating of PCB laden sediments; therefore, this technology should not be rejected until a cost-effective analysis and risk assessment has been conducted.

The drying bed technology for solids dewatering will require an effluent control and treatment system. This treatment system will need to be effective in treating PCB and other pollutants in compliance with NPDES requirements and water quality standards.

Regarding the criteria for screening of dredging equipment (separate report, not part of screening process study) the dredging technologies will not cause interference to harbor traffic since there is little or no harbor traffic in the vicinity of the hot-spot areas. Therefore this criterion should be deleted from the list "Criteria for Screening of Dredging Equipment".

Questions regarding these comments should be forwarded to Richard Tomczyk of my staff at (617)-292-5672.

Very truly yours,

Thomas C. McMahon
Director

TCM/RT/pmm
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